

Checklist No. 3— Items for Renewable Energy Power System (REPS) Installations

Installation Address: _____

Tested by/Date
(N/A if not applicable)

(a) Power Generating Equipment

(i) The solar PV panels are certified by the recognised national/international organisations or relevant testing and certification authorities complying with relevant safety standards such as IEC 61215, BS EN 61215, IEC 61730, UL 1703 or equivalent.

(ii) Other renewable energy power generating equipment (e.g. wind turbine) complies with relevant international design/safety standards.

(b) Inverter

(i) Anti-islanding function incorporated (with tripping time as required by the Electricity Supplier).

(ii) Synchronisation check function incorporated (to ensure that connection of the inverter to the distribution system will only take place when the inverter output and the distribution system are operating in synchronism).

Tested by/Date
(N/A if not applicable)

(iii) Automatic isolation function incorporated (to isolate the REPS from the distribution system automatically when fault occurs in the REPS).

(iv) Voltage and frequency regulator incorporated.

(v) Under / Over-frequency / voltage protection function incorporated (to disconnect the inverter from the distribution system when the frequency and/or voltage of the Grid falls out of normal range).

(vi) Auto-reconnection function incorporated (to reconnect the inverter back to the distribution system when the frequency and/or voltage of the Grid resumes to normal operational range for a pre-defined period of time (with such time period to be agreed with the Electricity Supplier)).

(vii) Inverter are certified by the recognised national/international organisations or relevant testing and certification authorities complying with relevant safety standards such as IEC 62109, BS EN 62109, UL 1741 or equivalent.

(c) Lightning Protection

(i) Proper lightning protection systems provided for the outdoor equipment.

Tested by/Date
(N/A if not applicable)

(d) Outdoor Installation

- (i) Equipment installed outdoor being selected and erected in compliance with Code 15 of CoP.

(e) REPS Circuit

- (i) DC protection devices provided for the circuits between renewable energy power generating equipment and inverter in compliance with Code 9 of CoP.

- (ii) Inverter incorporated with isolation transformer or separated isolation transformer in compliance with IEC 61558 or equivalent provided.

- (iii) Pre- & post-meter lockable switches (DP / 4P) provided for isolating all sources of supply from the Grid and REPS to Renewable Energy Meter.

- (iv) The earth fault loop impedance of the circuit in compliance with Code 11 of CoP.

- (v) Operation of isolators, circuit breakers and switches checked in compliance with Code 21B(9) of CoP.

- (vi) The RCD/RCBO trip time checked in compliance with Code 21B(9) of CoP (if applicable).

Tested by/Date
(N/A if not applicable)

(f) Earthing

Appropriate protective conductors effectively connected.

(g) Notice and Labels

(i) Notice displayed at the facility showing the name and registration number of the REC employed for maintaining the generating facility in continuous safe work order checked in compliance with Code 17 of CoP.

(ii) Dual power supply warning labels displayed at all electrical equipment with dual power supply sources checked in compliance with Code 17 of CoP.

(iii) DC warning labels displayed at DC switchgear checked in compliance with Code 17 of CoP.

Remarks: REC and REW are required to ensure their responsible fixed electrical installation is able to comply with the relevant requirements of Code of Practice for the Electricity (Wring) Regulations (CoP), rather than the items as listed in the checklists only.